

**Oral History Program: Biographical Notes**

**Stanley Alexander AMBROSE (1926 - )  
Pressure Equipment Engineer**

- Birth & Family:** Born 21 July, 1926, Queen Victoria Hospital, Melbourne; father a jeweller and engraver. Married Barbara (deceased 1991), children Greg, Warren and Roger.
- Education:** 1932-1942 Coburg State School, Coburg High School.
- Qualifications:** B. Mech E University of Melbourne 1946-1949.
- Memberships:** FIEAust.; Welding Technology Institute of Australia; Institute of Metals and Materials Australia; founding member of Australian Institute for Non-Destructive Testing 1973; SA/NZS Committee ME/1 Pressure Equipment; SA/NZS S/Committee ME/1/3 Pressure Vessels; International Committee on Pressure Vessel Technology; WTIA Panel 1 Pressure Vessels; PEAC-ANZ Pressure Equipment Advisory Committee – Australia/New Zealand; AICIP Chairman National Panel of Examiners for In-service Inspectors of Pressure Equipment; Chairman, SAA Mechanical Standards Board; Engine Drivers and Boiler Attendants Board; WTIA NSW Division; IEAust National Committee on Applied Mechanics; Australian Institute for the Certification of Inspection Personnel.
- Awards:** WTIA – The Florence Taylor Award 1977  
Standards Australia – The Standards Award 1993 (jointly)  
WTIA - Wilfred Chapman Award 1995  
OAM 1997 Services to mechanical engineering in standards for pressure equipment
- Work History:** After leaving school, Ambrose joined the Public Service as a clerk in the Correspondence Branch, and upon turning 18 left to join the RAAF as a Flight Mechanic where he topped the Flight Mechanics Course. Upon leaving the RAAF Ambrose rejoined the Public Service, applied for a post-war reconstruction training course in engineering and commenced an Engineering Degree at Melbourne University in March 1946 where he developed an interest in welding.
- Ambrose's first job was with C.O.R. (Colonial Oil Refineries, later BP) as a Design Engineer where he designed road tankers, rail tank car handling equipment, fluid handling systems (especially heavy oils), the boiler plant and heat exchangers at Port Melbourne, pipelines and mixing systems; he also investigated exotropic materials handling. As Resident Engineer was responsible for the erection of large storage tanks and associated piping and was involved in conversion of a landing barge to an oil lighter. Ambrose developed a great respect for welders.
- Ambrose then joined the Navy, primarily to further his interest in welding. He was stationed at the Navy Office at St Kilda working with the Principal Naval Architect and the Principal Mechanical Engineer and providing advice on matters such as materials, corrosion and welding. Around 1957 Ambrose became interested in underwater gas cylinders.

In 1962 he accepted an invitation to join the Standards Association in Sydney to help solve their pressure vessel problems and to develop new standards for boilers and pressure vessels. It was at his suggestion that research be done on cold stretched pressure vessels and he also carried out development work on them.

Ambrose left the Standards Association in 1969 when he was asked to join the Australian Welding Research Association as Chief Engineer working for Sir William Hudson. Once more, Ambrose's main aim was to gain more information about welding. Among his achievements were: acting as a "troubleshooter" for the industry, as well as helping to develop research on welding; provision of information for the hot tapping of the main Gidealba to Adelaide pipeline; ultrasonic checks on power station drum nozzles; fixed shell fatigue cracks in Queensland Alumina mills.

Ambrose's was next asked to join NSW Department of Labour & Industry as Chief Inspector to help in the application of standards and technology. One of the challenges was to correct the over-inspection of pressure equipment in boilers in NSW. Ambrose also spent a 12-month period as Assistant Director of Major Hazards, during which time he was seconded as Chief Inspector of Dangerous Goods and became involved in the problem of whether fireworks should be controlled or banned. The solution was to control their sale and a retail firework ban was implemented.

Among the various international conferences Ambrose attended were TC 11 in New York in 1967, an International Standards Conference in Stockholm in 1970 and in 1996 the 8<sup>th</sup> International Conference on Pressure Vessel Technology.

In 1981 Ambrose organised the IEA Conference on Pressure Vessels which included quality management principles. In 1986 he was invited to lecture in China.

Following his retirement in 1989, Ambrose was offered a position as a Director of Cryofab, a major pressure vessel manufacturer. He saw this as an opportunity to introduce new ideas into the system and became involved in research into the development of Australia's first liquefied natural gas fuel vessel.

Since retirement Ambrose has worked on various consultancies and for the 5 years prior to interview was working on a research project for Australian Gas Association on the development of high pressure gas cylinders.

At the time of interview, Ambrose was also heavily involved in the latest development of design for LPG vessels for use in vehicles to avoid explosions, and also in the setting up of ACIP, the Australian Institute for the Certification of Inspection Personnel.

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Prepared by Jill Willis, April 2006 from oral history interview conducted on 11.08.1997